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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/620,063	07/15/2003	Imad Said Abdul-Khalek	P-17.135	7122

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EXAMINER

LARKIN, DANIEL SEAN

ART UNIT PAPER NUMBER

2856

DATE MAILED: 05/20/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/620,063

Applicant(s)

ABDUL-KHALEK, IMAD SAID

Examiner

Daniel S. Larkin

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-6, 8 and 9 is/are allowed.
- 6) ☐ Claim(s) ____ is/are rejected.
- 7) ☒ Claim(s) 7 and 10-13 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 July 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date ____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: ____.

DETAILED ACTION

Drawings

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description:

Reference numeral "62" does not appear within Figure 1 as suggested by the disclosure on page 12, line 1.

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the "means for measuring the mass of collected particles", as recited in claims 1 and 2 in combination with all of the remaining limitations of the claim and the base claim, must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

3. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Specification

4. The disclosure is objected to because of the following informalities:

Page 14, line 2: A -- period -- should be inserted after the term "above".

Appropriate correction is required.

Claim Objections

5. Claims 7 and 10-13 are objected to because of the following informalities:

Re claim 7, claim lines 1 and 2: The phrase "the first and second samples" lacks antecedent basis. The "second sample" is not claimed until claim 2.

Re claim 10, claim line 1: The designation "10.An" should be corrected to read

-- 10. An --.

Re claims 11, claim line 1: The designation "11.The" should be corrected to read

-- 11. The --.

Re claims 12, claim line 1: The designation "12.The" should be corrected to read

-- 12. The --.

Re claims 13, claim line 1: The designation "13.The" should be corrected to read

-- 13. The --. Appropriate correction is required.

Allowable Subject Matter

6. The following is a statement of reasons for the indication of allowable subject matter:

Prior art was not relied upon to reject claims 1-13 because the prior art fails to teach and/or make obvious the following:

Claims 1-9: Providing a method for measuring mass, size and number of particles comprising directing a first sample of an exhaust gas through a catalytic stripper; and cooling the first sample to a temperature from about twenty-five degree

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Celsius to about fifty two degree Celsius in combination with all of the remaining limitations of the base.

Claims 10-13: Providing an apparatus for measuring mass, size and number of particle comprising a catalytic stripper and a micro-dilution tunnel for mixing an exhaust gas with air to form a mixture of air and exhaust gas having a temperature of less than about fifty two degrees Celsius in combination with all of the remaining limitations of the claim.

7. Claims 1-6, 8 and 9 are allowed.

8. Claims 7 and 10-13 are objected to, but would be allowable if corrected in accordance with the examiner's suggestions made above with respect to paragraph five.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The prior art to US 6,205,842 (Patashnick et al.) and US 6,502,450 (Patashnick et al.) each disclose a differential particulate mass monitor with intrinsic correction for volatilization loss comprising passing a particle laden gas stream containing particulates and other volatiles through a particle remover (48) which substantially removes all particulate matter from the gas stream; engaging a mass detector with the "cleaned"

gas stream; switching the particle remover to an off position so as to allow the unfiltered gas stream to engage the mass detector; alternating this activation pattern for successive measurement time periods; and determining from the difference in readings from the mass detector a measure of the mass or concentration of particulate matter in the particle laden gas.

The prior art to US 6,516,654 (Uchihara et al.) discloses an apparatus and method for analyzing particulate matter in gas and apparatus and method for carbon differentiating comprising: collecting (22) a sample containing particulate matter from an exhaust pipe (21) attached to a motor vehicle (20); placing the collected sample in a dilution tunnel (23) to be diluted with clean air (24); capturing the particulate matter onto a filter (28); placing the filter into a heated furnace with inert gas; passing a first gas flow containing gasified hydrocarbons and sulfate into an oxidation processor (14A) to become carbon dioxide and water which is passed with other gases to a carbon dioxide analyzer (15A); passing a second gas sample containing gasified hydrocarbons and sulfate into a reduction processor (14B) whereby the sulfate out of the evaporated hydrocarbon and sulfate becomes sulfur dioxide which is passed to a sulfur dioxide analyzer; and weighing the dry soot in the particulate matter captured by the filter.


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10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel S. Larkin whose telephone number is 571-272-2198. The examiner can normally be reached on 8:00 AM - 5:00 PM Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hezron Williams can be reached on 571-272-2208. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Daniel Larkin
AU 2856
14 May 2004


DANIEL S. LARKIN
PRIMARY EXAMINER